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Timberland and Woodland Resources Outside National Forests in Northeastern Wyoming, 1984

Alan W. Green
Gretchen Moisen

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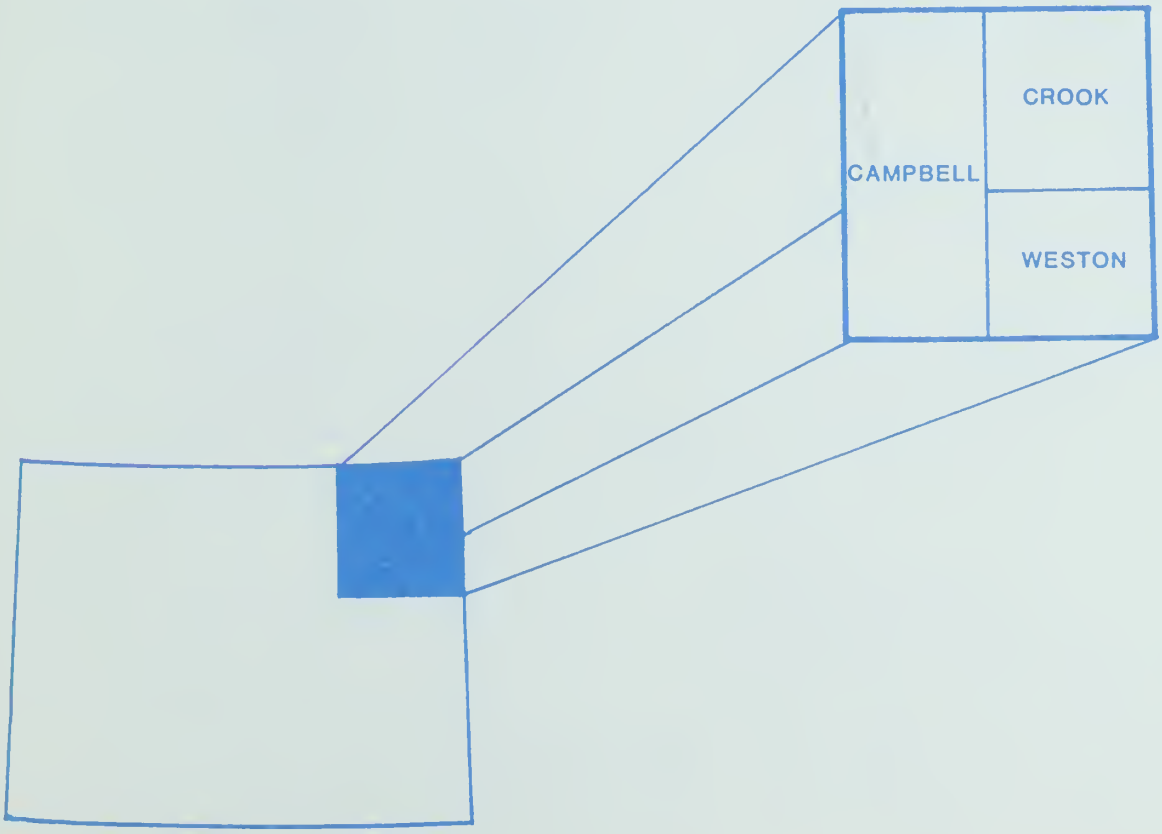

PREFACE

Forest Survey is a continuing nationwide undertaking conducted by the Forest Service, U.S. Department of Agriculture, with the primary objective of providing an assessment of the renewable resources on the Nation's forests. This requires periodic State-by-State resource inventories. Originally, Forest Survey was authorized by the McSweeney-McNary Act of 1928. The current authorization is through the Renewable Resources Research Act of 1978.

The Intermountain Research Station, with headquarters in Ogden, UT, administers the forest resource inventories for the Rocky Mountain States of Arizona, Colorado, Idaho, Montana, New Mexico, Nevada, Utah, Wyoming, western South Dakota, western Texas, and Oklahoma's Panhandle. These inventories provide information on the extent and condition of State and privately owned forest lands, volume of timber, and rates of timber growth and mortality. These data, when combined with similar information for Federal lands, provide a basis for forest policies and programs and for the orderly development and use of the resources.

THE AUTHORS

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ACKNOWLEDGMENTS

This report is the result of the combined efforts of numerous people on the Forest Survey staff. In addition to the photo interpretation and field crews, several individuals played key roles in the reduction of basic data into information describing the extent, nature, and condition of the forest resources in Wyoming: Dennis Collins supervised the data collection; Sharon Woudenberg and Shirley Waters compiled the data and made summaries; and Susan Brown transformed the data summaries into tables of information. And we extend a special note of gratitude to the private land owners who allowed the field crews access to the sample locations on their properties.

RESEARCH SUMMARY

Highlights the results of forest inventory of northeastern Wyoming (Campbell, Crook, and Weston Counties). Presents area, volume, growth, and mortality statistics for both timberland and woodlands outside the Black Hills National Forest as of 1984.

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Timberland and Woodland Resources Outside National Forests in Northeastern Wyoming, 1984

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INTRODUCTION

For the latest inventory of forest land in Wyoming, completed in 1983, the State was divided into three multicounty Sample Areas. Within those sample areas all nonreserved forest land (including woodland) not under the administration of the USDA Forest Service were inventoried.

Sample Area 3, the subject area of this report, is the smallest and comprises three counties (Campbell, Crook, and Weston) in the northeastern corner of the State (fig. 1). Sample Areas 1 and 2 cover the rest of the State and are subjects of separate reports.

The data in this report pertain only to the lands outside the Black Hills National Forest and the Thunder Basin National Grassland, both administered by the Forest Service. Data for public lands administered by other agencies such as the USDI Bureau of Land Management (BLM) and the State of Wyoming are included along with those for privately owned lands.

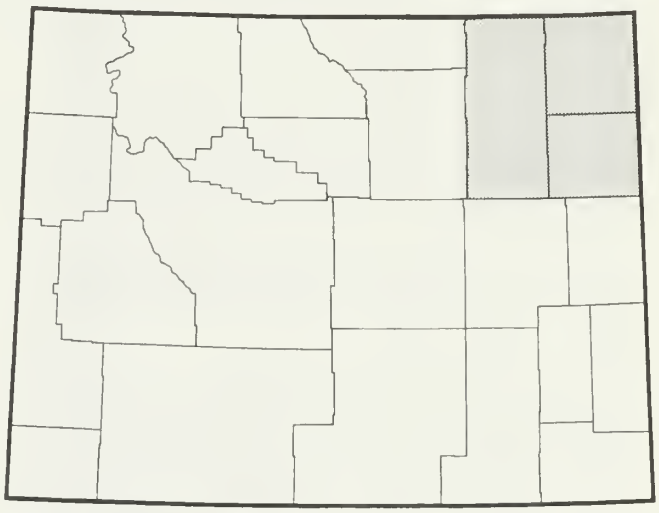

Figure 1—Sample Area 3, northeastern Wyoming.

HIGHLIGHTS

Area, Forest Type, Stand Size

Most of the forest land in northeastern Wyoming is in Crook and Weston Counties (fig. 2). Forests occupy nearly 784,000 acres of privately and publicly owned land. (See table 1 for total land and water area by ownership class.)

Roughly 85 percent of the forest is timberland that is made up of two forest types, ponderosa pine (softwood) and aspen (hardwood). Nearly all the timberland (98 percent) is ponderosa pine. The aspen type covers about 11,000 acres but occurs as small patches stuck here and there in the landscape.

The woodland also has two basic components. The juniper type (softwood) consists solely of Rocky Mountain juniper (*Juniperus scopulorum*), totaling about 89,000 acres. Woodland hardwoods in the western part of the Sample Area include bur oak (*Quercus macrocarpa*) and green ash (*Fraxinus pennsylvanica*).

Productivity of the forest land is relatively low. Little if any of the timberland is capable of producing more than 50 cubic feet of wood per acre per year. About 3 percent of the timberland cannot produce 20 cubic feet per acre per year.

About two-thirds of the ponderosa pine type is in sawtimber-size stands; 11 percent is nonstocked.

Figure 2—General geographic location of forest land in northeastern Wyoming.

The aspen type typically has either small trees or virtually no trees. Areas of seedling-sapling stands and nonstocked areas are about equal, with most of the nonstocked areas on private land.

Of the forest land outside the Black Hills National Forest, 83 percent is privately owned and 99 percent of it is in the ponderosa pine forest type. Only 9 percent of the private timberland is considered nonstocked.

The ponderosa type occupies about 95 percent of other public lands, but nearly a fourth of the timberland is nonstocked.

Volume

The forest land outside the National Forest contains an estimated 616 million cubic feet of wood volume. About 42 million cubic feet of it (7 percent) is in woodland tree species.

The 569 million cubic feet of ponderosa pine (*Pinus ponderosa*) represents nearly all the volume in timber species.

About 88 percent of the timberland volume and 87 percent of the total volume is on private land.

The timberland area does not support large per-acre sawtimber volumes. Over 75 percent has less than 5,000 board feet per acre.

Roughly 74 percent of the volume in sawtimber-size trees is in trees less than 17 inches diameter at breast height (d.b.h.).

Only a fourth of the growing-stock trees are sawtimber size—that is, 9 inches d.b.h. and larger. But 83 percent of the growing-stock volume is in trees 9 inches and larger.

About 88 percent of the sawtimber volume (International 1/4-inch rule) is in trees less than 19 inches d.b.h.

About 97 percent of the total volume is in growing-stock trees. But there are 18.6 million cubic feet of usable wood in salvable dead trees.

COMPONENTS OF CHANGE

Growth

Net annual growth of growing stock in 1983 was about 12 million cubic feet, virtually all of it ponderosa pine and 86 percent of it on private land.

About 85 percent of the net growth was on trees less than 15 inches d.b.h., reflecting the size class distribution of the growing-stock trees.

Net growth of sawtimber was about 71 million board feet (International 1/4-inch rule) and was concentrated (92 percent) on trees less than 17 inches d.b.h.

Mortality

In 1983 gross growth on timberlands was around 13.7 million cubic feet, but 16 million cubic feet died (11.9 percent of gross growth and less than 1 percent of the volume), leaving a net increase of 12.1 million cubic feet.

The primary causes of death were insects and disease (62 percent), weather (31 percent), and logging operations (7 percent). Weather damage was largely from ice/snow storms.

Removals

In 1983 nearly 80 million board feet (International 1/4-inch rule) of sawtimber were removed from the timberland due to harvest of industrial roundwood. This figure includes volume cut from the portion of the Black Hills National Forest in Wyoming and represents 45 percent of the statewide sawtimber removals due to harvest (McLain 1987).

Harvest (includes deadwood and trees less than sawtimber size) from outside the National Forest totaled 48.8 million board feet (International 1/4-inch rule), 46.2 million (95 percent) of it from private land. Most of the harvest came from Crook County, and nearly all of it was ponderosa pine.

The harvest from other public and private land represented about 2 percent of the volume and 70 percent of the net growth.

HOW THE INVENTORY WAS CONDUCTED

The inventory was designed to provide reliable statistics primarily at the State and Sample Area levels.

Prefield

Primary area estimates were based on the classification of 26,031 sample points systematically placed on the latest aerial photographs available. The photo points, adjusted to meet known land areas by owner class, were used to stratify and compute expansion factors for the field sample data.

Field

Land classification and estimates for forest characteristics and volume were based on observations and measurements recorded at 942 ground sample locations, of which 130 were forested. Sample trees on timberland plots were selected using 5-point cluster, which included 1/300-acre field radius plots for trees less than 5 inches d.b.h., and variable radius plots (40 BAF) for trees 5 inches or larger. Sample trees on woodland plots were selected using a 1/5-, 1/10-, or 1/20-acre fixed plot for trees 3 inches diameter at root collar (d.r.c.) and larger. Trees less than 3 inches d.r.c. were tallied on a 1/100-acre subplot.

Compilation

All photo and field data were entered into a computer for editing, computation, and tabulation. Final estimates from these data were based on statistical summaries, a portion of which is included in this bulletin. Volume and defect were computed using equations developed by Edminster and others (1981), Kemp (1958), Chojnacky (1985), Meyers (1964a, 1964b), and Meyers and Edminster (1972). Defect for woodland species was computed from field observations.

DATA RELIABILITY

Individual cells within tables should be used with caution. Some are based on small sample sizes, which may result in high sampling errors. The standard error percentages shown in tables 2 and 3 were calculated at the 67 percent confidence level.

STANDARD FOREST SURVEY TERMINOLOGY

Acceptable trees—Growing-stock trees meeting specified standards of size and quality, but not qualifying as desirable trees.

Area condition class—A classification of timberland reflecting the degree to which the site is being utilized by growing-stock trees and other conditions affecting current and prospective timber growth (see Stocking):

Class 10—Areas fully stocked with desirable trees and not overstocked.

Class 20—Areas fully stocked with desirable trees, but overstocked with all live trees.

Class 30—Areas medium to fully stocked with desirable trees and with less than 30 percent of the area controlled by other trees and/or inhibiting vegetation or surface conditions that will prevent occupancy by desirable trees.

Class 40—Areas medium to fully stocked with desirable trees and with 30 percent or more of the area controlled by other trees, or conditions that ordinarily prevent occupancy by desirable trees, or both.

Class 50—Areas poorly stocked with desirable trees, but fully stocked with growing-stock trees.

Class 60—Areas poorly stocked with desirable trees, but with medium to full stocking of growing-stock trees.

Class 70—Areas nonstocked or poorly stocked with desirable trees, and poorly stocked with growing-stock trees.

Class 80—Low-risk old-growth stands.

Class 90—High-risk old-growth stands.

Nonstocked—Areas less than 10 percent stocked with growing-stock trees.

Basal area—The cross-sectional area of a tree expressed in square feet. For timber species the calculation is based on diameter at breast height (d.b.h.); for woodland species it is based on diameter at root collar (d.r.c.).

Christmas tree grade—Pinyon species are classified as Christmas trees using the following guidelines:

Premium—Excellent conical form with no gaps in branches and a straight bole.

Standard—Good conical form with small gaps in branches and bole slightly malformed.

Utility—Conical in form with branches missing and bole bent or malformed.

Cull—Not meeting one of the above classifications or over 12 feet in height.

Cord—A pile of stacked wood equivalent to 128 cubic feet of wood and air space having standard dimensions of 4 by 4 by 8 feet.

Cull trees—Live trees that are unmerchantable now or prospectively (see Rough tree and Rotten tree).

Cull volume—Portions of a tree's volume that are not usable for wood products because of rot, missing or dead material, or other cubic-foot defect.

Deferred forest land—Forest lands within the National Forest System that are under study for possible inclusion in the Wilderness System.

Desirable trees—Growing-stock trees (1) having no serious defect in quality to limit present or prospective use for timber products, (2) of relatively high vigor, and (3) containing no pathogens that may result in death or serious deterioration within the next decade.

Diameter at breast height (d.b.h.)—Diameter of the stem measured at 4.5 feet above the ground.

Diameter at root collar (d.r.c.)—Diameter equivalent at the point nearest the ground line that represents the basal area of the tree stem or stems.

Diameter classes—Tree diameters, either d.b.h. or d.r.c., grouped into 2-inch classes labeled by the midpoint of the class.

Farmer/rancher-owned lands—Lands owned by a person who operates a farm or a ranch and who either does the work or directly supervises the work.

Forest industry lands—Lands owned by companies or individuals operating a primary wood-processing plant.

Forest land—Land at least 10 percent stocked by forest trees of any size, including land that formerly had such tree cover and that will be naturally or artificially regenerated. The minimum area for classification of forest land is 1 acre. Roadside, streamside, and shelterbelt strips of timber must have a crown width at least 120 feet wide to qualify as forest land. Unimproved roads and trails, streams, and clearings in forest areas are classified as forest if less than 120 feet wide.

Forest trees—Woody plants having a well-developed stem or stems, usually more than 12 feet in height at maturity, with a generally well-defined crown.

Forest type—A classification of forest land based upon and named for the tree species presently forming a plurality of live-tree stocking.

Gross annual growth—The average annual increase in the net volume of trees during a specified period.

Growing-stock trees—Live sawtimber trees, poletimber trees, saplings, and seedlings of timber species meeting specified standards of quality and vigor; excludes cull trees.

Growing-stock volume—Net cubic-foot volume in live poletimber-size and sawtimber-size growing-stock trees from a 1-foot stump to a minimum 4-inch top (of central stem) outside bark or to the point where the central stem breaks into limbs.

Growth—See definition for Net annual growth.

Hardwood trees—Dicotyledonous trees, usually broad-leaved and deciduous.

High-risk old-growth stands—Timber stands over 100 years old in which the majority of the trees are not expected to survive more than 10 years.

Indian lands—Indian lands held in trust by the Federal Government.

Industrial wood—All commercial roundwood products except fuelwood.

Land area—The area of dry land and land temporarily or partially covered by water such as marshes, swamps, and river flood plains, streams, sloughs, estuaries, and canals less than 120 feet wide; and lakes, reservoirs, and ponds less than 1 acre in size.

Logging residues—The unused portions of growing-stock trees cut or killed by logging.

Low-risk old-growth stands—Timber stands over 100 years old in which the majority of the trees are expected to survive more than 10 years.

Miscellaneous Federal lands—Lands administered by Federal agencies other than the U.S. Department of Agriculture, Forest Service or U.S. Department of the Interior, Bureau of Land Management.

Mortality—The net volume of growing-stock trees that have died from natural causes during a specified period.

National Forest lands—Public lands administered by the U.S. Department of Agriculture, Forest Service.

National Resource lands—Public lands administered by the U.S. Department of the Interior, Bureau of Land Management.

Net annual growth—Gross annual growth minus average annual mortality.

Net dead volume—Total net volume of dead trees plus the net volume of dead material in live trees.

Net volume in board feet—The gross board-foot volume in the sawlog portion of growing-stock trees, less deductions for cull volume.

Net volume in cubic feet—Gross cubic-foot volume in the merchantable portion of trees less deductions for cull volume. For timber species, volume is computed for the merchantable stem from a 1-foot stump to a minimum 4-inch top diameter outside bark (d.o.b.), or to the point where the central stem breaks into limbs. For woodland species, volume is computed outside bark (o.b.) for all woody material above d.r.c. that is larger than 1.5 inches d.o.b.

Nonforest land—Land that does not currently qualify as forest land.

Nonindustrial private—All private ownerships except forest industry.

Nonstocked areas—Forest land less than 10 percent stocked with live trees.

Old-growth stands—Stands of timber species over 100 years old.

Other private land—Privately owned land other than forest industry or farmer-owned.

Other public land—Public land administered by agencies other than the U.S. Department of Agriculture, Forest Service.

Other removals—The net volume of growing-stock trees removed from the inventory by cultural operations such as timber-stand improvement, by land clearing, and by changes in land use, such as a shift to wilderness.

Poletimber stands—Stands at least 10 percent stocked with growing-stock trees, in which half or more of the stocking is sawtimber or poletimber trees or both, with poletimber stocking exceeding that of sawtimber (see definition for Stocking).

Poletimber trees—Live trees of timber species at least 5 inches d.b.h. but smaller than sawtimber size.

Posts—Juniper and oak species are evaluated for post potential using the following criteria:

Line post—A 7-foot minimum length with 5 to 7 inches diameter at the butt, 2.5-inch minimum small end diameter, and reasonably straight and solid.

Corner post—An 8-foot minimum length with 7 to 9 inches diameter at the butt, 2.5-inch minimum small end diameter, and reasonably straight and solid.

Potential growth—The average net annual cubic-foot growth per acre at culmination of mean annual growth attainable in fully stocked natural stands.

Primary wood-processing plants—Plants using roundwood products such as sawlogs, pulpwood bolts, veneer logs, and so forth.

Productivity class—A classification of forest land that reflects biological potential. For timberland the potential net annual growth at culmination of mean annual increment in fully stocked natural stands is the index used. For woodland, characteristics that affect the land's ability to produce wood, such as soil depth and aspect, are used. Furthermore, woodland is classified as high site where sustained wood production is likely, or low site where the continuous production of wood is unlikely.

Removals—The net volume of growing-stock trees removed from the inventory by harvesting, cultural operations, land clearings, or changes in land use.

Reserved forest land—Forest land withdrawn from tree utilization through statute or administrative designation.

Residues:

Coarse residues—Plant residues suitable for chipping, such as slabs, edgings, and ends.

Fine residues—Plant residues not suitable for chipping, such as sawdust, shavings, and veneer clippings. Plant residues—Wood materials from primary manufacturing plants that are not used for any product.

Rotten tree—A live poletimber or sawtimber tree with more than 67 percent of its total volume cull (cubic-foot), and with more than half of the cull volume attributable to rotten or missing material.

Rough tree—A live poletimber or sawtimber tree with more than 67 percent of its total volume cull (cubic-foot), and with less than half of the cull volume attributable to rotten or missing material.

Roundwood—Logs, bolts, or other round sections cut from trees.

Salvable dead trees—Standing or down dead trees that are currently merchantable by regional standards.

Saplings—Live trees of timber species 1 to 4.9 inches d.b.h., or woodland species 1 to 2.9 inches d.r.c.

Sapling and seedling stands—Timberland stands at least 10 percent stocked on which more than half of the stocking is saplings or seedlings or both.

Sawlog portion—That part of the bole of sawtimber trees between a 1-foot stump and the sawlog top.

Sawlog top—The point on the bole of sawtimber trees above which a sawlog cannot be produced. The minimum sawlog top is 7 inches d.o.b. for softwoods and 9 inches d.o.b. for hardwoods.

Sawtimber stands—Stands at least 10 percent stocked with growing-stock trees, with half or more of total stocking in sawtimber or poletimber trees, and with sawtimber stocking at least equal to poletimber stocking.

Sawtimber trees—Live trees of timber species meeting regional size and defect specifications. Softwood trees must be at least 9 inches d.b.h. and hardwood trees 11 inches d.b.h.

Sawtimber volume—Net volume in board feet of the sawlog portion of live sawtimber trees.

Seedlings—Established live trees of timber species less than 1 inch d.b.h. or woodland species less than 1 inch d.r.c.

Softwood trees—Monocotyledonous trees, usually evergreen, having needle or scalelike leaves.

Standard error—An expression of the degree of confidence that can be placed on an estimated total or average obtained by statistical sampling methods. Standard errors do not include technique errors that could occur in photo classification of areas, field measurements, or compilation of data.

Stand-size classes—A classification of forest land based on the predominant size of trees present (see Sawtimber stands, Poletimber stands, and Sapling and seedling stands).

State, county, and municipal lands—Lands administered by States, counties, and local public agencies, or lands leased by these governmental units for more than 50 years.

Stocking—An expression of the extent to which growing space is effectively utilized by present or potential growing-stock trees of timber species.

Timberland—Forest land where timber species make up at least 10 percent stocking.

Timber species—Tree species traditionally used for industrial wood products. In the Rocky Mountain States, these include aspen and cottonwood hardwood species and all softwood species except pinyon and juniper.

Timber stand improvement—Treatments such as thinning, pruning, release cutting, girdling, weeding, or poisoning of unwanted trees aimed at improving growing conditions for the remaining trees.

Upper-stem portion—That part of the main stem or fork of sawtimber trees above the sawlog top to a minimum top diameter of 4 inches outside bark or to the point where the main stem or fork breaks into limbs.

Water—Streams, sloughs, estuaries, and canals more than 120 feet wide, and lakes, reservoirs, and ponds more than 1 acre in size at mean high water level.

Wilderness—An area of undeveloped land currently included in the Wilderness System, managed so as to preserve its natural conditions and retain its primeval character and influence.

Woodland—Forest land where timber species make up less than 10 percent stocking.

Woodland species—Tree species not usually converted into industrial wood products. Common uses are fuelwood, fenceposts, and Christmas trees.

REFERENCES

Chojnacky, David C. 1985. Pinyon-juniper volume equations for the central Rocky Mountain States. Res. Pap. INT-339. Ogden, UT: U.S. Department of Agriculture, Forest Service, Intermountain Forest and Range Experiment Station. 27 p.

Edminster, Carleton B.; Mowrer, H. Todd; Hinds, Thomas E. 1981. Volume tables and point-sampling factor for aspen in Colorado. Res. Pap. RM-232. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Forest and Range Experiment Station. 16 p.

Kemp, Paul D. 1958. Volume tables. Unpublished report on file at: U.S. Department of Agriculture, Forest Service, Intermountain Research Station, Ogden, UT.

McLain, William H. 1987. Wyoming and western South Dakota—timber production and mill residues, 1983. Resour. Bull. INT-45. Ogden, UT: U.S. Department of Agriculture, Forest Service, Intermountain Research Station. 32 p.

Meyers, Clifford A. 1964a. Volume tables and point-sampling factors for lodgepole pine in Colorado and Wyoming. Res. Pap. RM-6. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Forest and Range Experiment Station. 16 p.

Meyers, Clifford A. 1964b. Volume tables and point-sampling factors for ponderosa pine in the Black Hills.

Res. Pap. RM-8. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Forest and Range Experiment Station. 16 p.

Meyers, Clifford A.; Edminster, Carleton B. 1972. Volume tables and point-sampling factors for Engelmann spruce in Colorado and Wyoming. Res. Pap. RM-95. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Forest and Range Experiment Station. 23 p.

FOREST SURVEY TABLES

Table 1--Total land and water area by ownership class in northeastern Wyoming, 1984

Ownership class	Area
	- - Acres - -
Land:	
Public:	
National Forest	560,564
Other public:	
Bureau of Land Management	465,810
National Parks[1]	1,347
Miscellaneous Federal	6,256
State	487,856
Total other public	961,269
Total public	1,521,833
Private	4,912,336
Total land area	6,434,169
Census water	10,240
Total land and water[2]	6,444,409

[1]Not included with miscellaneous Federal, a component of other public, for purpose of clarity. These lands, and other reserved lands, are included in tables 1, 2, 4, and 5 only.

[2]U.S. Department of Commerce, Bureau of Census. Area measurement reports, GE-20 No. 1, 22p., 1970, updated to account for changes in inland water estimates obtained from the USDA, Soil Conservation Service's National Resource Inventory, 1982.

Table 2--Area of forest land outside National Forests with percent standard error in northeastern Wyoming, 1984

Item	Softwoods		Hardwoods		All types	
	Acres	Percent standard error	Acres	Percent standard error	Acres	Percent standard error
Timberland	648,468	±3.9	11,429	±70.5	659,897	±3.7
Woodland	89,212	±26.4	34,674	±44.0	123,886	±22.0
Reserved forest land:[1]						
Timberland	1,347		--		1,347	
Woodland	--		--		--	
Total forest land[2]	739,027		46,103		785,130	

[1]Reserved land areas are estimated from aerial photos without field verification; therefore, standard errors are not calculated.
[2]On this and all following tables, totals may vary due to rounding.

Table 3--Net volume, net annual growth, and annual mortality of growing stock and sawtimber on timberland outside National Forests with percent standard error in northeastern Wyoming

Item	Softwoods		Hardwoods		All species	
	Volume	Percent standard error	Volume	Percent standard error	Volume	Percent standard error
Net volume, 1984:						
Growing stock (M cubic feet)	571,613	±9.3	2,052	±74.0	573,665	±9.3
Sawtimber[1] (M board feet)	2,177,232	±10.9	6,150	±100.0	2,183,382	±10.9
Sawtimber[2] (M board feet)	1,811,511	±11.1	5,296	±100.0	1,816,807	±11.0
Net annual growth, 1983:						
Growing stock (M cubic feet)	12,010	±12.2	25	±71.4	12,035	±12.1
Sawtimber[1] (M board feet)	71,059	±14.4	85	±100.0	71,144	±14.4
Sawtimber[2] (M board feet)	58,239	±14.2	72	±100.0	58,311	±14.2
Annual mortality, 1983:						
Growing stock (M cubic feet)	1,629	±60.0	--	±0.0	1,629	±60.0
Sawtimber[1] (M board feet)	5,981	±77.9	--	±0.0	5,981	±77.9
Sawtimber[2] (M board feet)	4,960	±79.8	--	±0.0	4,960	±79.8

[1]International ¼-inch rule.
[2]Scribner rule.

Table 4--Total land area outside National Forests by major land class and ownership class in northeastern Wyoming, 1984

Land class	Ownership class		
	Other public	Private	Total
	Acres		
Timberland:			
Reserved	1,347	--	1,347
Nonreserved	111,765	548,132	659,897
Total	113,112	548,132	661,244
Woodland:			
Reserved	--	--	--
Nonreserved	46,993	76,893	123,886
Total	46,993	76,893	123,886
Total forest land:			
Reserved	1,347	--	1,347
Nonreserved	158,758	625,025	783,783
Total	160,105	625,025	785,130
Nonforest land	801,164	4,287,311	5,088,475
Total land area	961,269	4,912,336	5,873,605

Table 5--Area of forest land outside National Forests by forest type, ownership class, and land class in northeastern Wyoming, 1984

Forest type	Ownership class and land class						
	Other public		Private		All owners		Total
	Reserved	Nonreserved	Reserved	Nonreserved	Reserved	Nonreserved	
	Acres						
Ponderosa pine	1,347	105,784	--	542,684	1,347	648,468	649,815
Aspen	--	5,981	--	5,448	--	11,429	11,429
Total timberland	1,347	111,765	--	548,132	1,347	659,897	661,244
Juniper	--	40,280	--	48,932	--	89,212	89,212
Oak	--	6,713	--	20,971	--	27,684	27,684
Other hardwoods	--	--	--	6,990	--	6,990	6,990
Total woodland	--	46,993	--	76,893	--	123,886	123,886
Total all types	1,347	158,758	--	625,025	1,347	783,783	785,130

Table 6--Cubic feet of net volume in trees on forest land outside National Forests by species and ownership class in northeastern Wyoming, 1984

Species	Ownership class		
	Other public	Private	Total
	- - - - - Thousand cubic feet - - - - -		
Ponderosa pine	70,236	508,133	578,369
Aspen	--	2,052	2,052
Total timberland species	70,236	510,185	580,421
Woodland softwoods	11,373	13,014	24,387
Woodland hardwoods	5,409	42,206	47,615
Total woodland species	16,782	55,220	72,002
Total all species	87,018	565,405	652,423

Table 7--Cubic feet of net annual growth in trees on forest land outside National Forests by species and ownership class in northeastern Wyoming, 1983

Species	Ownership class		
	Other public	Private	Total
	- - - - - Thousand cubic feet - - - - -		
Ponderosa pine	1,704	10,408	12,112
Aspen	--	26	26
Total timberland species	1,704	10,434	12,138
Woodland softwoods	197	104	301
Woodland hardwoods	115	465	580
Total woodland species	312	569	881
Total all species	2,016	11,003	13,019

Table 8--Cubic feet of annual mortality in trees on forest land outside National Forests by species and ownership class in northeastern Wyoming, 1983

Species	Ownership class		
	Other public	Private	Total
	- - - - - Thousand cubic feet - - - - -		
Ponderosa pine	59	1,570	1,629
Aspen	--	--	--
Total timberland species	59	1,570	1,629
Woodland softwoods	--	--	--
Woodland hardwoods	--	102	102
Total woodland species	--	102	102
Total all species	59	1,672	1,731

Table 9--Area of timberland outside National Forests by forest type, stand-size class, and productivity class in northeastern Wyoming, 1984

Forest type and stand-size class	Productivity class		Total acres
	20-49	0-19	
	Acres		
Ponderosa pine:			
Sawtimber	428,164	4,443	432,607
Poletimber	62,470	7,100	69,570
Sapling and seedling	74,063	--	74,063
Nonstocked	60,799	11,429	72,228
Total	625,496	22,972	648,468
Aspen:			
Sawtimber	--	--	--
Poletimber	--	--	--
Sapling and seedling	5,981	--	5,981
Nonstocked	5,448	--	5,448
Total	11,429	--	11,429
All types:			
Sawtimber	428,164	4,443	432,607
Poletimber	62,470	7,100	69,570
Sapling and seedling	80,044	--	80,044
Nonstocked	66,247	11,429	77,676
Total	636,925	22,972	659,897

Table 10--Area of other publicly owned timberland by forest type, stand-size class, and productivity class in northeastern Wyoming, 1984

Forest type and stand-size class	Productivity class		Total acres
	20-49	0-19	
	Acres		
Ponderosa pine:			
Sawtimber	56,100	4,443	60,543
Poletimber	15,302	--	15,302
Sapling and seedling	4,879	--	4,879
Nonstocked	19,079	5,981	25,060
Total	95,360	10,424	105,784
Aspen:			
Sawtimber	--	--	--
Poletimber	--	--	--
Sapling and seedling	5,981	--	5,981
Nonstocked	--	--	--
Total	5,981	--	5,981
All types:			
Sawtimber	56,100	4,443	60,543
Poletimber	15,302	--	15,302
Sapling and seedling	10,860	--	10,860
Nonstocked	19,079	5,981	25,060
Total	101,341	10,424	111,765

Table 11--Area of privately owned timberland by forest type, stand-size class, and productivity class in northeastern Wyoming, 1984

Forest type and stand-size class	Productivity class		Total acres
	20-49	0-19	
	Acres		
Ponderosa pine:			
Sawtimber	372,064	--	372,064
Poletimber	47,168	7,100	54,268
Sapling and seedling	69,184	--	69,184
Nonstocked	41,720	5,448	47,168
Total	530,136	12,548	542,684
Aspen:			
Sawtimber	--	--	--
Poletimber	--	--	--
Sapling and seedling	--	--	--
Nonstocked	5,448	--	5,448
Total	5,448	--	5,448
All types:			
Sawtimber	372,064	--	372,064
Poletimber	47,168	7,100	54,268
Sapling and seedling	69,184	--	69,184
Nonstocked	47,168	5,448	52,616
Total	535,584	12,548	548,132

Table 12--Area of timberland outside National Forests by stand volume and ownership class in northeastern Wyoming, 1984

Stand volume per acre[1]	Ownership class		Total
	Other public	Private	
	Acres		
Less than 1,500 board feet	60,108	207,546	267,654
1,500 to 4,999 board feet	37,457	194,344	231,801
5,000 to 9,999 board feet	9,757	97,640	107,397
10,000 board feet or more	4,443	48,602	53,045
All classes	111,765	548,132	659,897

[1]International ¼-inch rule.

Table 13--Area of timberland outside National Forests by forest type and area condition class in northeastern Wyoming, 1984

Forest type	Area condition class									Nonstocked	All classes
	10	20	30	40	50	60	70	80	90		
	Acres										
Ponderosa pine	--	--	--	--	47,387	224,598	215,038	--	89,217	72,228	648,468
Aspen	--	--	--	--	--	5,981	--	--	--	5,448	11,429
All types	--	--	--	--	47,387	230,579	215,038	--	89,217	77,676	659,897

Table 14--Number of growing-stock trees on timberland outside National Forests by species and diameter class in northeastern Wyoming, 1984

Species	Diameter class (inches at breast height)															All classes
	1.0-2.9	3.0-4.9	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-22.9	23.0-24.9	25.0-26.9	27.0-28.9	29.0+	
	Thousand trees															
Ponderosa pine	24,368	28,079	18,673	14,036	11,003	8,163	4,510	2,079	1,297	355	287	28	39	--	--	112,917
Total softwoods	24,368	28,079	18,673	14,036	11,003	8,163	4,510	2,079	1,297	355	287	28	39	--	--	112,917
Aspen	1,794	2,429	--	114	--	58	45	--	--	--	--	--	--	--	--	4,440
Total hardwoods	1,794	2,429	--	114	--	58	45	--	--	--	--	--	--	--	--	4,440
All species	26,162	30,508	18,673	14,150	11,003	8,221	4,555	2,079	1,297	355	287	28	39	--	--	117,357

Table 15--Number of cull and salvable dead trees on timberland outside National Forests by ownership class, and softwoods and hardwoods in northeastern Wyoming, 1984

Ownership class and species group	Cull trees			Salvable dead trees	Total
	Rough	Rotten	Total		
	- - - - - - - - - Thousand trees - - - - - - - - -				
Other public:					
Softwoods	--	--	--	59	59
Hardwoods	--	--	--	--	--
Total	--	--	--	59	59
Private:					
Softwoods	357	104	461	1,980	2,441
Hardwoods	--	112	112	--	112
Total	357	216	573	1,980	2,553
Total:					
Softwoods	357	104	461	2,039	2,500
Hardwoods	--	112	112	--	112
Total	357	216	573	2,039	2,612

Table 16--Net volume of growing stock on timberland outside National Forests by ownership class, forest type, and stand-size class in northeastern Wyoming, 1984

Ownership class	Forest type	Stand-size class				All classes
		Sawtimber	Poletimber	Sapling/ seedling	Nonstocked	
		- - - - - - - - - - Thousand cubic feet - - - - - - - - - -				
Other public:						
	Ponderosa pine	52,676	5,211	2,899	2,259	63,045
	Aspen	--	--	2,932	--	2,932
	All types	52,676	5,211	5,831	2,259	65,977
Private:						
	Ponderosa pine	446,389	36,973	20,045	2,927	506,334
	Aspen	--	--	--	1,354	1,354
	All types	446,389	36,973	20,045	4,281	507,688
Total:						
	Ponderosa pine	499,065	42,184	22,944	5,186	569,379
	Aspen	--	--	2,932	1,354	4,286
	All types	499,065	42,184	25,876	6,540	573,665

Table 17--Net volume of sawtimber (International ¼-inch rule) on timberland outside National Forests by ownership class, forest type, and stand-size class in northeastern Wyoming, 1984

Ownership class	Forest type	Stand-size class				All classes
		Sawtimber	Poletimber	Sapling/ seedling	Nonstocked	
		- - - Thousand board feet, International ¼-inch rule - - -				
Other public:						
	Ponderosa pine	211,368	7,764	8,723	8,847	236,702
	Aspen	--	--	6,735	--	6,735
	All types	211,368	7,764	15,458	8,847	243,437
Private:						
	Ponderosa pine	1,796,222	59,992	67,075	10,506	1,933,795
	Aspen	--	--	--	6,150	6,150
	All types	1,796,222	59,992	67,075	16,656	1,939,945
Total:						
	Ponderosa pine	2,007,590	67,756	75,798	19,353	2,170,497
	Aspen	--	--	6,735	6,150	12,885
	All types	2,007,590	67,756	82,533	25,503	2,183,382

Table 18--Net volume of sawtimber (Scribner rule) on timberland outside National Forests by ownership class, forest type, and stand-size class in northeastern Wyoming, 1984

Ownership class	Forest type	Stand-size class				All classes
		Sawtimber	Poletimber	Sapling/ seedling	Nonstocked	
		- - - - - - Thousand board feet, Scribner rule - - - - - -				
Other public:						
	Ponderosa pine	175,254	5,443	6,987	7,179	194,863
	Aspen	--	--	5,509	--	5,509
	All types	175,254	5,443	12,496	7,179	200,372
Private:						
	Ponderosa pine	1,498,829	49,821	53,618	8,871	1,611,139
	Aspen	--	--	--	5,296	5,296
	All types	1,498,829	49,821	53,618	14,167	1,616,435
Total:						
	Ponderosa pine	1,674,083	55,264	60,605	16,050	1,806,002
	Aspen	--	--	5,509	5,296	10,805
	All types	1,674,083	55,264	66,114	21,346	1,816,807

Table 19--Net volume of growing stock on timberland outside National Forests by species and ownership class in northeastern Wyoming, 1984

Species	Ownership class		
	Other public	Private	Total
	- - - - - Thousand cubic feet - - - - -		
Ponderosa pine	65,977	505,636	571,613
Total softwoods	65,977	505,636	571,613
Aspen	--	2,052	2,052
Total hardwoods	--	2,052	2,052
All species	65,977	507,688	573,665

Table 20--Net volume of sawtimber (International ¼-inch rule) on timberland outside National Forests by species and ownership class in northeastern Wyoming, 1984

Species	Ownership class		
	Other public	Private	Total
	- Thousand board feet, International ¼-inch rule -		
Ponderosa pine	243,437	1,933,795	2,177,232
Total softwoods	243,437	1,933,795	2,177,232
Aspen	--	6,150	6,150
Total hardwoods	--	6,150	6,150
All species	243,437	1,939,945	2,183,382

Table 21--Net volume of sawtimber (Scribner rule) on timberland outside National Forests by species and ownership class in northeastern Wyoming, 1984

Species	Ownership class		
	Other public	Private	Total
	- Thousand board feet, Scribner rule -		
Ponderosa pine	200,372	1,611,139	1,811,511
Total softwoods	200,372	1,611,139	1,811,511
Aspen	--	5,296	5,296
Total hardwoods	--	5,296	5,296
All species	200,372	1,616,435	1,816,807

Table 22--Net volume of growing stock on timberland outside National Forests by species and diameter class in northeastern Wyoming, 1984

Species	Diameter class (inches at breast height)													All classes
	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-22.9	23.0-24.9	25.0-26.9	27.0-28.9	29.0+	
	Thousand cubic feet													
Ponderosa pine	29,663	65,603	99,701	117,971	98,765	63,650	53,052	18,232	18,116	2,491	4,369	--	--	571,613
Total softwoods	29,663	65,603	99,701	117,971	98,765	63,650	53,052	18,232	18,116	2,491	4,369	--	--	571,613
Aspen	--	698	--	710	644	--	--	--	--	--	--	--	--	2,052
Total hardwoods	--	698	--	710	644	--	--	--	--	--	--	--	--	2,052
All species	29,663	66,301	99,701	118,681	99,409	63,650	53,052	18,232	18,116	2,491	4,369	--	--	573,665

Table 23--Net volume of sawtimber (International ¼-inch rule) on timberland outside National Forests by species and diameter class in northeastern Wyoming, 1984

Species	Diameter class (inches at breast height)											All classes
	9.0-10.9	11.0-10.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-22.9	23.0-24.9	25.0-26.9	27.0-28.9	29.0+	
	Thousand board feet, International ¼-inch rule											
Ponderosa pine	318,778	482,869	477,077	339,051	300,902	107,032	108,890	15,372	27,261	--	--	2,177,232
Total softwoods	318,778	482,869	477,077	339,051	300,902	107,032	108,890	15,372	27,261	--	--	2,177,232
Aspen	XXXXX	3,176	2,974	--	--	--	--	--	--	--	--	6,150
Total hardwoods	XXXXX	3,176	2,974	--	--	--	--	--	--	--	--	6,150
All species	318,778	486,045	480,051	339,051	300,902	107,032	108,890	15,372	27,261	--	--	2,183,382

Table 24--Net volume of sawtimber (Scribner rule) on timberland outside National Forests by species and diameter class in northeastern Wyoming, 1984

Species	Diameter class (inches at breast height)											All classes
	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-22.9	23.0-24.9	25.0-26.9	27.0-28.9	29.0+	
	Thousand board feet, Scribner rule											
Ponderosa pine	245,539	408,269	399,838	278,448	253,495	92,332	95,646	13,682	24,262	--	--	1,811,511
Total softwoods	245,539	408,269	399,838	278,448	253,495	92,332	95,646	13,682	24,262	--	--	1,811,511
Aspen	XXXXX	2,741	2,555	--	--	--	--	--	--	--	--	5,296
Total hardwoods	XXXXX	2,741	2,555	--	--	--	--	--	--	--	--	5,296
All species	245,539	411,010	402,393	278,448	253,495	92,332	95,646	13,682	24,262	--	--	1,816,807

Table 25--Net volume of timber on timberland outside National Forests by class of timber, and softwoods and hardwoods in northeastern Wyoming, 1984

Class of timber	Softwoods	Hardwoods	All classes
	- - - - - Thousand cubic feet - - - - -		
Sawtimber trees:			
Sawlog portion	401,305	991	402,296
Upper-stem portion	75,042	363	75,405
Total	476,347	1,354	477,701
Poletimber trees	95,266	698	95,964
All growing-stock trees	571,613	2,052	573,665
Rough cull trees	664	--	664
Rotten cull trees	231	153	384
Salvable dead trees	18,596	--	18,596
All timber	591,104	2,205	593,309

Table 26--Net volume of growing stock on timberland outside National Forests by forest type and species in northeastern Wyoming, 1984

Forest type	Species				All species
	Ponderosa pine	Total softwoods	Aspen	Total hardwoods	
	- - - - - - - - - - Thousand cubic feet - - - - - - - - -				
Ponderosa pine	568,681	568,681	698	698	569,379
Aspen	2,932	2,932	1,354	1,354	4,286
All types	571,613	571,613	2,052	2,052	573,665

Table 27--Net volume of sawtimber (International ¼-inch rule) on timberland outside National Forests by forest type and species in northeastern Wyoming, 1984

Forest type	Species				
	Ponderosa pine	Total softwoods	Aspen	Total hardwoods	All species
	- - Thousand board feet, International ¼-inch rule - -				
Ponderosa pine	2,170,497	2,170,497	--	--	2,170,497
Aspen	6,735	6,735	6,150	6,150	12,885
All types	2,177,232	2,177,232	6,150	6,150	2,183,382

Table 28--Net volume of sawtimber (Scribner rule) on timberland outside National Forests by forest type and species in northeastern Wyoming, 1984

Forest type	Species				
	Ponderosa pine	Total softwoods	Aspen	Total hardwoods	All species
	- - - - - Thousand board feet, Scribner rule - - - - - -				
Ponderosa pine	1,806,002	1,806,002	--	--	1,806,002
Aspen	5,509	5,509	5,296	5,296	10,805
All types	1,811,511	1,811,511	5,296	5,296	1,816,807

Table 29--Net annual growth of growing stock on timberland outside National Forests by species and ownership class in northeastern Wyoming, 1983

Species	Ownership class		Total
	Other public	Private	
	- - - - - - Thousand cubic feet - - - - - -		
Ponderosa pine	1,673	10,336	12,009
Total softwoods	1,673	10,336	12,009
Aspen	--	26	26
Total hardwoods	--	26	26
All species	1,673	10,362	12,035

Table 30--Net annual growth of sawtimber (International ¼-inch rule) on timberland outside National Forests by species and ownership class in northeastern Wyoming, 1983

Species	Ownership class		Total
	Other public	Private	
	- Thousand board feet, International ¼-inch rule -		
Ponderosa pine	6,644	64,415	71,059
Total softwoods	6,644	64,415	71,059
Aspen	--	85	85
Total hardwoods	--	85	85
All species	6,644	64,500	71,144

Table 31--Net annual growth of sawtimber (Scribner rule) on timberland outside National Forests by species and ownership class in northeastern Wyoming, 1983

Species	Ownership class		
	Other public	Private	Total
	- - - Thousand board feet, Scribner rule - - -		
Ponderosa pine	5,320	52,919	58,239
Total softwoods	5,320	52,919	58,239
Aspen	--	72	72
Total hardwoods	--	72	72
All species	5,320	52,991	58,311

Table 32--Net annual growth of growing stock on timberland outside National Forests by species and diameter class in northeastern Wyoming, 1983

Species	Diameter class (inches at breast height)													All classes
	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-22.9	23.0-24.9	25.0-26.9	27.0-28.9	29.0+	
	Thousand cubic feet													
Ponderosa pine	1,337	2,128	2,167	2,495	2,110	907	409	221	187	19	30	--	--	12,010
Total softwoods	1,337	2,128	2,167	2,495	2,110	907	409	221	187	19	30	--	--	12,010
Aspen	--	10	--	9	6	--	--	--	--	--	--	--	--	25
Total hardwoods	--	10	--	9	6	--	--	--	--	--	--	--	--	25
All species	1,337	2,138	2,167	2,504	2,116	907	409	221	187	19	30	--	--	12,035

Table 33--Net annual growth of sawtimber (International ¼-inch rule) on timberland outside National Forests by species and diameter class in northeastern Wyoming, 1983

Species	Diameter class (inches at breast height)											All classes
	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-22.9	23.0-24.9	25.0-26.9	27.0-28.9	29.0+	
	Thousand board feet, International ¼-inch rule											
Ponderosa pine	30,688	14,828	13,275	6,294	2,954	1,468	1,233	122	197	--	--	71,059
Total softwoods	30,688	14,828	13,275	6,294	2,954	1,468	1,233	122	197	--	--	71,059
Aspen	XXXXX	53	32	--	--	--	--	--	--	--	--	85
Total hardwoods	XXXXX	53	32	--	--	--	--	--	--	--	--	85
All species	30,688	14,881	13,307	6,294	2,954	1,468	1,233	122	197	--	--	71,144

Table 34--Net annual growth of sawtimber (Scribner rule) on timberland outside National Forests by species and diameter class in northeastern Wyoming, 1983

Species	Diameter class (inches at breast height)											All classes
	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-22.9	23.0-24.9	25.0-26.9	27.0-28.9	29.0+	
	Thousand board feet, Scribner rule											
Ponderosa pine	23,783	12,864	10,599	5,322	2,813	1,410	1,164	109	175	--	--	58,239
Total softwoods	23,783	12,864	10,599	5,322	2,813	1,410	1,164	109	175	--	--	58,239
Aspen	XXXXX	45	27	--	--	--	--	--	--	--	--	72
Total hardwoods	XXXXX	45	27	--	--	--	--	--	--	--	--	72
All species	23,783	12,909	10,626	5,322	2,813	1,410	1,164	109	175	--	--	58,311

Table 35--Annual mortality of growing stock on timberland outside National Forests by species and ownership class in northeastern Wyoming, 1983

Species	Ownership class		
	Other public	Private	Total
	- - - - - - Thousand cubic feet - - - - - - -		
Ponderosa pine	59	1,570	1,629
Total softwoods	59	1,570	1,629
Aspen	--	--	--
Total hardwoods	--	--	--
All species	59	1,570	1,629

Table 36--Annual mortality of sawtimber (International ¼-inch rule) on timberland outside National Forests by species and ownership class in northeastern Wyoming, 1983

Species	Ownership class		
	Other public	Private	Total
	- Thousand board feet, International ¼-inch rule -		
Ponderosa pine	175	5,806	5,981
Total softwoods	175	5,806	5,981
Aspen	--	--	--
Total hardwoods	--	--	--
All species	175	5,806	5,981

Table 37--Annual mortality of sawtimber (Scribner rule) on timberland outside National Forests by species and ownership class in northeastern Wyoming, 1983

Species	Ownership class		
	Other public	Private	Total
	- - - Thousand board feet, Scribner rule - - -		
Ponderosa pine	105	4,855	4,960
Total softwoods	105	4,855	4,960
Aspen	--	--	--
Total hardwoods	--	--	--
All species	105	4,855	4,960

Table 38--Annual mortality of growing stock on timberland outside National Forests by species and diameter class in northeastern Wyoming, 1983

Species	Diameter class (inches at breast height)													
	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-22.9	23.0-24.9	25.0-26.9	27.0-28.9	29.0+	All classes
	- Thousand cubic feet -													
Ponderosa pine	279	108	419	243	--	266	314	--	--	--	--	--	--	1,629
Total softwoods	279	108	419	243	--	266	314	--	--	--	--	--	--	1,629
Aspen	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total hardwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
All species	279	108	419	243	--	266	314	--	--	--	--	--	--	1,629

Table 39--Annual mortality of sawtimber (International ¼-inch rule) on timberland outside National Forests by species and diameter class in northeastern Wyoming, 1983

Species	Diameter class (inches at breast height)											All classes
	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-22.9	23.0-24.9	25.0-26.9	27.0-28.9	29.0+	
	Thousand board feet, International ¼-inch rule											
Ponderosa pine	1,410	1,168	--	1,517	1,886	--	--	--	--	--	--	5,981
Total softwoods	1,410	1,168	--	1,517	1,886	--	--	--	--	--	--	5,981
Aspen	XXXXX	--	--	--	--	--	--	--	--	--	--	--
Total hardwoods	XXXXX	--	--	--	--	--	--	--	--	--	--	--
All species	1,410	1,168	--	1,517	1,886	--	--	--	--	--	--	5,981

Table 40--Annual mortality of sawtimber (Scribner rule) on timberland outside National Forests by species and diameter class in northeastern Wyoming, 1983

Species	Diameter class (inches at breast height)											All classes
	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-22.9	23.0-24.9	25.0-26.9	27.0-28.9	29.0+	
	Thousand board feet, Scribner rule											
Ponderosa pine	1,071	984	--	1,258	1,647	--	--	--	--	--	--	4,960
Total softwoods	1,071	984	--	1,258	1,647	--	--	--	--	--	--	4,960
Aspen	XXXXX	--	--	--	--	--	--	--	--	--	--	--
Total hardwoods	XXXXX	--	--	--	--	--	--	--	--	--	--	--
All species	1,071	984	--	1,258	1,647	--	--	--	--	--	--	4,960

Table 41--Annual mortality of growing stock on timberland outside National Forests by species and cause of death in northeastern Wyoming, 1983

Species	Cause of death								Total
	Insects	Disease	Fire	Animal	Weather	Suppression	Logging	Unknown	
	Thousand cubic feet								
Ponderosa pine	641	373	--	--	507	--	108	--	1,629
Total softwoods	641	373	--	--	507	--	108	--	1,629
Aspen	--	--	--	--	--	--	--	--	--
Total hardwoods	--	--	--	--	--	--	--	--	--
All species	641	373	--	--	507	--	108	--	1,629

Table 42--Annual mortality of sawtimber (International ¼-inch rule) on timberland outside National Forests by species and cause of death in northeastern Wyoming, 1983

Species	Cause of death								Total
	Insects	Disease	Fire	Animal	Weather	Suppression	Logging	Unknown	
	Thousand board feet, International ¼-inch rule								
Ponderosa pine	3,078	2,062	--	--	841	--	--	--	5,981
Total softwoods	3,078	2,062	--	--	841	--	--	--	5,981
Aspen	--	--	--	--	--	--	--	--	--
Total hardwoods	--	--	--	--	--	--	--	--	--
All species	3,078	2,062	--	--	841	--	--	--	5,981

Table 43--Annual mortality of sawtimber (Scribner rule) on timberland outside National Forests by species and cause of death in northeastern Wyoming, 1983

Species	Cause of death								Total
	Insects	Disease	Fire	Animal	Weather	Suppression	Logging	Unknown	
	Thousand board feet, Scribner rule								
Ponderosa pine	2,478	1,752	--	--	730	--	--	--	4,960
Total softwoods	2,478	1,752	--	--	730	--	--	--	4,960
Aspen	--	--	--	--	--	--	--	--	--
Total hardwoods	--	--	--	--	--	--	--	--	--
All species	2,478	1,752	--	--	730	--	--	--	4,960

Table 44--Area of woodland outside National Forests by forest type and ownership class in northeastern Wyoming, 1984

Forest type	Ownership class		
	Other public	Private	Total
	- - - - - - - - - -	Acres	- - - - - - - - - -
Juniper	40,280	48,932	89,212
Total woodland softwoods	40,280	48,932	89,212
Oak	6,713	20,971	27,684
Other western hardwoods	--	6,990	6,990
Total woodland hardwoods	6,713	27,961	34,674
All types	46,993	76,893	123,886

Table 45--Area of woodland outside National Forests by ownership class, forest type, and productivity class in northeastern Wyoming, 1984

Ownership class	Forest type	Productivity class		All classes
		High	Low	
		- - - - - - - -	Acres	- - - - - - - - -
Other public:	Juniper	6,713	33,566	40,279
	Oak	6,714	--	6,714
	Other	--	--	--
	Total	13,427	33,566	46,993
Private:	Juniper	34,951	13,981	48,932
	Oak	20,971	--	20,971
	Other	--	6,990	6,990
	Total	55,922	20,971	76,893
Total:	Juniper	41,664	47,547	89,211
	Oak	27,685	--	27,685
	Other	--	6,990	6,990
	Total	69,349	54,537	123,886

Table 46--Area of woodland outside National Forests by ownership class, forest type, and volume class in northeastern Wyoming, 1984

Ownership class	Forest type	Volume class			All classes
		0 - 499 cu ft/acre	500-999 cu ft/acre	1,000+ cu ft/acre	
		Acres			
Other public:	Juniper	33,566	6,714	--	40,280
	Oak	--	6,713	--	6,713
	Other	--	--	--	--
	Total	33,566	13,427	--	46,993
Private:	Juniper	48,932	--	--	48,932
	Oak	6,990	6,991	6,990	20,971
	Other	--	6,990	--	6,990
	Total	55,922	13,981	6,990	76,893
Total:	Juniper	82,498	6,714	--	89,212
	Oak	6,990	13,704	6,990	27,684
	Other	--	6,990	--	6,990
	Total	89,488	27,408	6,990	123,886

Table 47--Number of trees on woodland outside National Forests by ownership class, species, and diameter class in northeastern Wyoming, 1984

Ownership class and species	Two-inch diameter at root collar class															All classes
	1.0-2.9	3.0-4.9	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-22.9	23.0-24.9	25.0-26.9	27.0-28.9	29.0+	
	Thousand trees															
Other public:																
Juniper	8,056	2,081	1,074	873	134	336	67	134	67	--	--	--	67	--	--	12,889
Oak	--	135	134	134	--	269	134	--	--	--	--	--	--	--	--	806
Other	--	134	135	--	--	--	--	--	--	--	--	--	--	--	--	269
Total	8,056	2,350	1,343	1,007	134	605	201	134	67	--	--	--	67	--	--	13,964
Private:																
Juniper	2,097	489	839	489	489	280	140	--	70	--	70	--	70	--	--	5,033
Oak	--	1,957	2,517	1,118	699	419	280	--	--	--	--	--	--	--	--	6,990
Other	--	839	699	140	140	279	--	140	140	--	--	--	--	--	--	2,377
Total	2,097	3,285	4,055	1,747	1,328	978	420	140	210	--	70	--	70	--	--	14,400
Total:																
Juniper	10,153	2,570	1,913	1,362	623	616	207	134	137	--	70	--	137	--	--	17,922
Oak	--	2,092	2,651	1,252	699	688	414	--	--	--	--	--	--	--	--	7,796
Other	--	973	834	140	140	279	--	140	140	--	--	--	--	--	--	2,646
Total	10,153	5,635	5,398	2,754	1,462	1,583	621	274	277	--	70	--	137	--	--	28,364

Table 48--Net volume on woodland outside National Forests by species and ownership class in northeastern Wyoming, 1984

Species	Ownership class		
	Other Public	Private	Total
	- - - - - Thousand cubic feet - - - - - -		
Ponderosa pine	4,260	2,497	6,757
Woodland softwoods	8,139	6,324	14,463
Woodland hardwoods	3,802	17,251	21,053
All species	16,201	26,072	42,273

Table 49--Net volume of woodland species on woodland outside National Forests by ownership class, species, and diameter class in northeastern Wyoming, 1984

Ownership class and species	Two-inch diameter at root collar class														All classes
	3.0-4.9	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-22.9	23.0-24.9	25.0-26.9	27.0-28.9	29.0+	
	Thousand cubic feet														
Other public:															
Juniper	675	920	1,385	299	1,265	403	979	810	--	--	--	1,403	--	--	8,139
Oak	45	187	484	--	1,662	1,335	--	--	--	--	--	--	--	--	3,713
Other	13	76	--	--	--	--	--	--	--	--	--	--	--	--	89
Total	733	1,183	1,869	299	2,927	1,738	979	810	--	--	--	1,403	--	--	11,941
Private:															
Juniper	131	584	652	1,159	620	743	--	704	--	1,477	--	254	--	--	6,324
Oak	1,073	2,574	2,424	1,232	1,214	2,095	--	--	--	--	--	--	--	--	10,612
Other	260	707	61	211	2,093	--	987	2,320	--	--	--	--	--	--	6,639
Total	1,464	3,865	3,137	2,602	3,927	2,838	987	3,024	--	1,477	--	254	--	--	23,575
Total:															
Juniper	806	1,504	2,037	1,458	1,885	1,146	979	1,514	--	1,477	--	1,657	--	--	14,463
Oak	1,118	2,761	2,908	1,232	2,876	3,430	--	--	--	--	--	--	--	--	14,325
Other	273	783	61	211	2,093	--	987	2,320	--	--	--	--	--	--	6,728
Total	2,197	5,048	5,006	2,901	6,854	4,576	1,966	3,834	--	1,477	--	1,657	--	--	35,516

Table 50--Net volume of woodland species on woodland outside National Forests by ownership class, forest type, and productivity class in northeastern Wyoming, 1984

Ownership class	Forest type	Productivity class		All classes
		High	Low	
		- - - Thousand cubic feet - - - -		
Other public:	Juniper	2,272	5,867	8,139
	Oak	3,802	--	3,802
	Other	--	--	--
	Total	6,074	5,867	11,941
Private:	Juniper	3,815	1,876	5,691
	Oak	11,121	--	11,121
	Other	--	6,763	6,763
	Total	14,936	8,639	23,575
Total:	Juniper	6,087	7,743	13,830
	Oak	14,923	--	14,923
	Other	--	6,763	6,763
	Total	21,010	14,506	35,516

Table 51--Net volume of woodland species on woodland outside National Forests by ownership class, forest type, and volume class in northeastern Wyoming, 1984

Ownership class	Forest type	Volume class: 0 - 499 cu ft/acre	500-999 cu ft/acre	1,000+ cu ft/acre	All classes
		Thousand cubic feet			
Other public:	Juniper	5,867	2,272	--	8,139
	Oak	--	3,802	--	3,802
	Other	--	--	--	--
	Total	5,867	6,074	--	11,941
Private:	Juniper	5,690	--	--	5,690
	Oak	1,074	4,145	5,903	11,122
	Other	--	6,763	--	6,763
	Total	6,764	10,908	5,903	23,575
Total:	Juniper	11,557	2,272	--	13,829
	Oak	1,074	7,947	5,903	14,924
	Other	--	6,763	--	6,763
	Total	12,631	16,982	5,903	35,516

Table 52--Net dead volume of woodland species on woodland outside National Forests by ownership class, species, and diameter class in northeastern Wyoming, 1984

Ownership class and species	Two-inch diameter at root collar class														All classes
	3.0-4.9	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-22.9	23.0-24.9	25.0-26.9	27.0-28.9	29.0+	
	Thousand cubic feet														
Other public:															
Juniper	7	9	84	--	12	--	137	41	--	--	--	70	--	--	360
Oak	2	--	24	--	--	--	--	--	--	--	--	--	--	--	26
Other	--	4	--	--	--	--	--	--	--	--	--	--	--	--	4
Total	9	13	108	--	12	--	137	41	--	--	--	70	--	--	390
Private:															
Juniper	--	--	3	18	56	--	--	--	--	--	--	25	--	--	102
Oak	12	587	1,014	16	--	--	--	--	--	--	--	--	--	--	1,629
Other	--	76	--	--	--	--	346	--	--	--	--	--	--	--	422
Total	12	663	1,017	34	56	--	346	--	--	--	--	25	--	--	2,153
Total:															
Juniper	7	9	87	18	68	--	137	41	--	--	--	95	--	--	462
Oak	14	587	1,038	16	--	--	--	--	--	--	--	--	--	--	1,655
Other	--	80	--	--	--	--	346	--	--	--	--	--	--	--	426
Total	21	676	1,125	34	68	--	483	41	--	--	--	95	--	--	2,543

Table 53--Net dead volume of woodland species on woodland outside National Forests by ownership class, forest type, and productivity class in northeastern Wyoming, 1984

Ownership class	Forest type	Productivity class		All classes
		High	Low	
		- - - Thousand cubic feet		- - - -
Other public:	Juniper	93	267	360
	Oak	30	--	30
	Other	--	--	--
	Total	123	267	390
Private:	Juniper	47	56	103
	Oak	1,628	--	1,628
	Other	--	422	422
	Total	1,675	478	2,153
Total:	Juniper	140	323	463
	Oak	1,658	--	1,658
	Other	--	422	422
	Total	1,798	745	2,543

Table 54--Net dead volume of woodland species on woodland outside National Forests by ownership class, forest type, and volume class in northeastern Wyoming, 1984

Ownership class	Forest type	Volume class: 0 - 499 cu ft/acre	500-999 cu ft/acre	1,000+ cu ft/acre	All classes
		- - - - - - - - Thousand cubic feet - - - - - - - -			
Other public:	Juniper	267	93	--	360
	Oak	--	30	--	30
	Other	--	--	--	--
	Total	267	123	--	390
Private:	Juniper	103	--	--	103
	Oak	--	--	1,628	1,628
	Other	--	422	--	422
	Total	103	422	1,628	2,153
Total:	Juniper	370	93	--	463
	Oak	--	30	1,628	1,658
	Other	--	422	--	422
	Total	370	545	1,628	2,543

Table 55--Net annual growth on woodland outside National Forests by species and ownership class in northeastern Wyoming, 1983

Species	Ownership class		
	Other Public	Private	Total
	- - - - - Thousand cubic feet - - - - -		
Ponderosa pine	30	72	102
Woodland softwoods	169	42	211
Woodland hardwoods	95	331	426
All species	294	445	739

Table 56--Net annual growth of woodland species on woodland outside National Forests by ownership class, species, and diameter class in northeastern Wyoming, 1983

Ownership class and species	Two-inch diameter at root collar class														All classes
	3.0-4.9	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-22.9	23.0-24.9	25.0-26.9	27.0-28.9	29.0+	
	Thousand cubic feet														
Other public:															
Juniper	30	36	32	5	29	6	15	7	--	--	--	9	--	--	169
Oak	2	5	11	--	38	23	--	--	--	--	--	--	--	--	79
Other	13	2	--	--	--	--	--	--	--	--	--	--	--	--	15
Total	45	43	43	5	67	29	15	7	--	--	--	9	--	--	263
Private:															
Juniper	1	6	11	9	4	3	--	3	--	5	--	1	--	--	43
Oak	30	65	50	10	12	9	--	--	--	--	--	--	--	--	176
Other	10	21	2	6	56	--	20	40	--	--	--	--	--	--	155
Total	41	92	63	25	72	12	20	43	--	5	--	1	--	--	374
Total:															
Juniper	31	42	43	14	33	9	15	10	--	5	--	10	--	--	212
Oak	32	70	61	10	50	32	--	--	--	--	--	--	--	--	255
Other	23	23	2	6	56	--	20	40	--	--	--	--	--	--	170
Total	86	135	106	30	139	41	35	50	--	5	--	10	--	--	637

Table 57--Net annual growth of woodland species on woodland outside National Forests by ownership class, forest type, and productivity class in northeastern Wyoming, 1983

Ownership class	Forest type	Productivity class		All classes
		High	Low	
		- - - Thousand cubic feet - - -		
Other public:	Juniper	80	88	168
	Oak	95	--	95
	Other	--	--	--
	Total	175	88	263
Private:	Juniper	20	18	38
	Oak	194	--	194
	Other	--	142	142
	Total	214	160	374
Total:	Juniper	100	106	206
	Oak	289	--	289
	Other	--	142	142
	Total	389	248	637

Table 58--Net annual growth of woodland species on woodland outside National Forests by ownership class, forest type, and volume class in northeastern Wyoming, 1983

Ownership class	Forest type	Volume class: 0 - 499 cu ft/acre	500-999 cu ft/acre	1,000+ cu ft/acre	All classes
		- - - - - - - - Thousand cubic feet - - - - - - - -			
Other public:	Juniper	88	80	--	168
	Oak	--	95	--	95
	Other	--	--	--	--
	Total	88	175	--	263
Private:	Juniper	38	--	--	38
	Oak	27	29	138	194
	Other	--	142	--	142
	Total	65	171	138	374
Total:	Juniper	126	80	--	206
	Oak	27	124	138	289
	Other	--	142	--	142
	Total	153	346	138	637

Table 59--Number of fenceposts on woodland outside National Forests by ownership class, species, and type of post in northeastern Wyoming, 1984

Ownership class	Species	Type of post		
		Line	Corner	Total
		- - - - Thousand fenceposts - - - -		
Other public:	Juniper	3,982	1,182	5,164
	Oak	134	658	792
	Total	4,116	1,840	5,956
Private:	Juniper	3,463	1,790	5,253
	Oak	10,520	4,406	14,926
	Total	13,983	6,196	20,179
Total:	Juniper	7,445	2,972	10,417
	Oak	10,654	5,064	15,718
	Total	18,099	8,036	26,135

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Green, Alan W.; Moisen, Gretchen. 1988. Timberland and woodland resources outside National Forests in northeastern Wyoming, 1984. Resour. Bull. INT-54. Ogden, UT: U.S. Department of Agriculture, Forest Service, Intermountain Research Station. 46 p.

Highlights the results of forest inventory of northeastern Wyoming (Campbell, Crook, and Weston Counties). Presents area, volume, growth, and mortality statistics for both timberland and woodlands outside the Black Hills National Forest as of 1984.

KEYWORDS: softwoods, hardwoods, growing-stock, sawtimber volumes, net annual growth, harvest

INTERMOUNTAIN RESEARCH STATION

The Intermountain Research Station provides scientific knowledge and technology to improve management, protection, and use of the forests and rangelands of the Intermountain West. Research is designed to meet the needs of National Forest managers, Federal and State agencies, industry, academic institutions, public and private organizations, and individuals. Results of research are made available through publications, symposia, workshops, training sessions, and personal contacts.

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